Page ____1__

of

4

FORM PTO-1449 (Rev 8/83)

SEPARTMENT OF COMMERCE

KERMATION DISCLOSURE STATEMENT

eral sheets if necessary)

Atty. Docket No.: Appl'n No.:

MP1454-US10 10/721,478

Applicant:

Graves et al.

Filing Date: Group:

Nov. 25, 2003 2832

US PATENT DOCUMENTS

| * Exr. initial | Document number | | PATENT DOCUMENTS | Class | Sub- |
|-------------------|--------------------|-----------------|-----------------------|--------------|--------------|
| | 2,482,316 | Date 09/20/1949 | Name Bocking | Class 338 | class 118 |
| BH | 3,221,145 | 11/30/1965 | Hager, Jr. | 219 | 549 |
| | 3,351,882 | 11/07/1967 | Kohler et al. | 338 | 322 |
| | 3,435,399 | 03/25/1969 | Gielisse et al. | 338 | 22R |
| | 3,497,859 | 02/24/1970 | | 338 | 309 |
| | 3,648,364 | 03/14/1972 | Bang Endo | 29 | 620 |
| | 3,775,725 | 11/27/1973 | Endo | 338 | 262 |
| | 3,835,434 | 09/10/1974 | | | 202 22R |
| | 4,088,828 | 05/09/1978 | Kahn | 338 | |
| | ` | | Yamamoto et al. | 174 | 263 |
| | 4,200,970 | 05/06/1980 | Schonberger | 29 | 593 |
| | 4,237,441 | 12/02/1980 | van Konynenburg et al | 338 | 22R |
| | 4,238,812 | 12/09/1980 | Middleman et al | 361 | 106 |
| | 4,255,698 | 03/10/1981 | Simon | 320 | 35 |
| | 4,272,471 | 06/09/1981 | Walker | 264 | 104 |
| | 4,304,987 | 12/08/1981 | van Konynenburg | 219 | 553 |
| | 4,315,237 | 02/09/1982 | Middleman et al | 338 | 22 R |
| | 4,317,027 | 02/23/1982 | Middleman et al | 219 | 553 |
| | 4,327,351 | 04/27/1982 | Walker | 338 | 22R |
| | 4,330,703 | 05/18/1982 | Horsma et al | 219 | 553 |
| | 4,352,083 | 09/28/1982 | Middleman et al | 338 | 23 |
| | 4,371,860 | 02/01/1983 | May et al. | 338 | 21 |
| | 4,388,607 | 06/14/1983 | Toy et al | 338 | 22 SD |
| | 4,426,633 | 01/17/1984 | Taylor | 338 | 25 |
| | 4,434,416 | 02/28/1984 | Schonberger | 338 | 203 |
| | 4,445,026 | 04/24/1984 | Walker | 219 | 553 |
| | 4,463,407 | 07/31/1984 | Berger et al. | 361 | 306.1 |
| | 4,475,138 | 10/02/1984 | Middleman et al | 361 | 58 |
| | 4,486,737 | 12/04/1984 | Ott | 338 | 22R |
| | 4,486,738 | 12/04/1984 | Sadlo et al. | 338 | 320 |
| | 4,514,620 | 04/30/1985 | Cheng et al | 219 | 553 |
| | 4,529,960 | 07/16/1985 | Uchida et al. | 338 | 309 |
| 081 | 4,534,889 | 08/13/1985 | van Konynenburg et al | 252 | 511 |

| - 14 HA 2419 | 10/16/56 |
|----------------------|-----------------|
| TU HOANG | 1 (4/16/06 |
| Examiner's signature | Date considered |

^{*} EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| Page | 2 | of | 4 |
|------|---|----|---|
| | | | |

| FORM PTO-1449 | U.S. DEPARTMENT OF COMMERCE | | Appl'n No.: | | |
|---------------|---------------------------------|---------------|----------------------|--|--|
| (Rev 8/83) | PATENT AND TRADEMARK OFFICE | MP1454-US10 | <u> 10/7</u> 21,478 | | |
| | | Appl | Applicant: | | |
| INFORM | ATION DISCLOSURE STATEMENT | Grave | s et al. | | |
| | | Filing Date: | Group: | | |
| (U: | se several sheets if necessary) | Nov. 25, 2003 | 2832 | | |

US PATENT DOCUMENTS (continued)

| | | US PATE | NT DOCUMENTS (continued) | | |
|------|-----------|------------|--------------------------|-----|-------|
| an | 4,545,926 | 10/08/1985 | Fouts et al | 252 | 511 |
| | 4,560,498 | 12/24/1985 | Horsma et al | 252 | 511 |
| | 4,591,700 | 05/27/1986 | Sopory | 219 | 505 |
| | 4,593,181 | 06/03/1986 | Jensen et al. | 219 | 541 |
| | 4,605,471 | 08/12/1986 | Mitchell | 216 | 18 |
| | 4,660,017 | 04/21/1987 | Momoki et al. | 338 | 21 |
| | 4,689,475 | 08/25/1987 | Kleiner et al. | 219 | 553 |
| | 4,706,060 | 11/10/1987 | May | 338 | 20 |
| | 4,714,910 | 12/22/1987 | Schwingenschuh et al. | 338 | 21 |
| | 4,724,417 | 02/09/1988 | Au et al | 338 | 22 R |
| | 4,757,298 | 07/12/1988 | Nishikawa et al. | 338 | 308 |
| | 4,757,581 | 07/19/1988 | Yamada et al. | 29 | 25.35 |
| | 4,774,024 | 09/27/1988 | Deep et al | 252 | 511 |
| | 4,777,718 | 10/18/1988 | Henderson et al. | 338 | 312X |
| | 4,780,598 | 10/25/1988 | Fahey et al | 219 | 511 |
| | 4,786,888 | 11/22/1988 | Yoneda et al. | 338 | 22R |
| | 4,788,523 | 11/29/1988 | Robbins | 338 | 309 |
| | 4,800,253 | 01/24/1989 | Kleiner et al | 219 | 553 |
| | 4,801,784 | 01/31/1989 | Jensen et al. | 338 | 22 R |
| | 4,811,164 | 03/07/1989 | Ling et al. | 361 | 321 |
| | 4,845,838 | 07/11/1989 | Jacobs et al | 29 | 671 |
| | 4,861,966 | 08/29/1989 | Matthiesen et al. | 219 | 205 |
| | 4,873,508 | 10/10/1989 | Ankenman et al. | 338 | 25 |
| | 4,876,439 | 10/24/1989 | Nagahori | 338 | 22 R |
| | 4,882,466 | 11/21/1989 | Friel | 219 | 219 |
| | 4,904,850 | 02/27/1990 | Claypool et al. | 219 | 548 |
| | 4,907,340 | 03/13/1990 | Fang et al. | 29 | 610.1 |
| | 4,924,074 | 05/08/1990 | Fang et al. | 219 | 548 |
| | 4,924,204 | 05/08/1990 | Uchida | 338 | 22 R |
| | 4,924,205 | 05/08/1990 | Caporali et al. | 338 | 227 |
| | 4,935,156 | 06/19/1990 | van Konynenburg et al. | 219 | 553 |
| | 4,937,551 | 06/26/1990 | Plasko | 338 | 22R |
| | 4,959,505 | 09/25/1990 | Ott | 174 | 52.2 |
| COBL | 4,977,309 | 12/11/1990 | Uchida | 219 | 541 |
| | | | | I | |

| T.1 1/2 1 1/2 | 11110 |
|----------------------|-----------------|
| TU HOANG | 10/16/06 |
| | (9/10/00 |
| Examiner's signature | Date considered |
| LAMINING 3 SIGNATURE | Date Considered |

^{*} EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | Page | 3 | of <u>4</u> |
|---------------|--------------------------------|-------------|-------------|-------------|
| | | | | |
| FORM PTO-1449 | U.S. DEPARTMENT OF COMMERCE | Atty. | Docket No.: | Appl'n No.: |
| (Rev 8/83) | PATENT AND TRADEMARK OFFICE | MP | 1454-US10 | 10/721,478 |
| | | | App | licant: |
| INFORMA | TION DISCLOSURE STATEMENT | | Grave | es et al. |
| | | Fi | ling Date: | Group: |
| (Us | e several sheets if necessary) | No | v. 25, 2003 | 2832 |

US PATENT DOCUMENTS(continued)

| US PATENT DOCUMENTS (continued) | | | | | | |
|---------------------------------|-----------|------------|-----------------|-----|------|--|
| OB | 4,992,771 | 02/12/1991 | Caporali et al. | 338 | 22R | |
| | 4,993,142 | 02/19/1991 | Burke et al. | 29 | 621 | |
| | 5,015,824 | 05/14/1991 | Monter et al. | 219 | 219 | |
| | 5,017,243 | 05/21/1991 | Otsubo | 136 | 244 | |
| | 5,049,850 | 09/17/1991 | Evans et al. | 338 | 22R | |
| | 5,057,811 | 10/15/1991 | Strott et al. | 338 | 22R | |
| | 5,085,364 | 02/04/1992 | Ishikawa et al. | 228 | 139 | |
| | 5,089,801 | 02/18/1992 | Chan et al. | 338 | 22R | |
| | 5,142,263 | 08/25/1992 | Childers et al | 338 | 21 | |
| | 5,194,316 | 03/16/1993 | Horner et al | 428 | 195 | |
| | 5,196,136 | 03/23/1993 | Dishart et al | 252 | 170 | |
| | 5,210,516 | 05/11/1993 | Shikama et al | 338 | 22R | |
| | 5,212,466 | 05/18/1993 | Yamada et al. | 338 | 22R | |
| | 5,216,404 | 06/01/1993 | Nagai et al. | 338 | 22SD | |
| | 5,228,188 | 07/20/1993 | Badihi et al | 29 | 623 | |
| | 5,241,741 | 09/07/1993 | Sugaya | 29 | 612 | |
| | 5,247,277 | 09/21/1993 | Fang et al. | 338 | 22R | |
| | 5,258,738 | 11/02/1993 | Schat | 338 | 332 | |
| | 5,271,548 | 12/21/1993 | Maiwald | 228 | 175 | |
| | 5,280,263 | 01/18/1994 | Sugaya | 338 | 22 R | |
| | 5,291,535 | 03/01/1994 | Baker et al | 378 | 22 | |
| 1 | 5,303,115 | 04/12/1994 | Nayar et al. | 361 | 106 | |
| | 5,347,258 | 09/13/1994 | Howard et al. | 338 | 333 | |
| | 5,351,390 | 10/04/1994 | Yamada et al. | 29 | 612 | |
| | 5,451,921 | 09/19/1995 | Crawford et al. | 338 | 220 | |
| Q81+ | 5,831,510 | 11/03/1998 | Zhang et al | 338 | 22R | |

| FOREIGN | PATENT | DOCUMENTS |
|---------|--------|------------------|
|---------|--------|------------------|

| * Exr. initial | Document number | Date | Country | Class | Sub- class |
|-------------------|-----------------|------------|---------|-------|---------------|
| ORIL | 0 223 404 | 05/27/1987 | Europe | H05B | 3/10 |
| 10 | 0 308 306 | 03/22/1989 | Europe | H01C | 1/14 |
| | 0 398 811 | 11/22/1990 | Europe | H01C | 1/14 |
| | 0 509 582 | 10/21/1992 | Europe | H01C | 7/00 |
| CORY | 0 649 562 | 03/04/1998 | Europe | H01C | 1/14 |

| | |
|----------------------|---------------------------------------|
| | 1 1 1 1 1 1 |
| TILL HOME | |
| TU HOANG | 10/16/06 |
| | i i i i i i i i i i i i i i i i i i i |
| Examiner's signature | Date considered |
| | Date considered |

^{*} EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| FORM PTO-1449 | U.S. DEPARTMENT OF COMMERCE | Atty. Docket No.: | Appl'n No.: |
|---------------|---------------------------------|-------------------|-------------|
| (Rev 8/83) | PATENT AND TRADEMARK OFFICE | MP1454-US10 | 10/721,478 |
| | | Applic | cant: |
| INFORM | ATION DISCLOSURE STATEMENT | Graves | et al. |
| | | Filing Date: | Group: |
| (U | se several sheets if necessary) | Nov. 25, 2003 | 2832 |

Page

| any | 28 16 593 | 10/18/1979 | ATENT DOCUMENTS (conti Germany | H01C | 7/02 |
|-----|-------------|------------|-----------------------------------|------|---------|
| 7 | 31 22 612 | 12/23/1982 | Germany | H01C | 17/06 |
| | 87 16 103 | 03/03/1988 | Germany | G01K | 7/16 |
| | 38 39 868 | 06/08/1989 | Germany | H01C | 7/02 |
| | 39 10 861 | 11/02/1989 | Germany | H01C | 1/14 |
| | 40 00 089 | 07/12/1990 | Germany | H01L | 31/0224 |
| | 1,415,454 | 11/26/1975 | United Kingdom | H05K | 7/10 |
| | WO 84/01259 | 03/29/1984 | International | H05K | 13/00 |
| | WO 94/01876 | 01/20/1994 | International | H01C | 1/14 |
| | WO 95/08176 | 03/23/1995 | International | H01C | 1/14 |
| | WO 95/31816 | 11/23/1995 | International | H01C | 1/14 |
| | 49-28594 | 08/03/1974 | Japan | H01C | 7/02 |
| | 54-73260 | 06/12/1979 | Japan | H01C | 7/00 |
| | 56-150802 | 11/21/1981 | Japan | H01C | 7/02 |
| | 61-124104 | 06/11/1986 | Japan | H01C | 7/10 |
| | 63-216301 | 09/08/1988 | Japan | H01C | 7/02 |
| | 63-244702 | 10/12/1988 | Japan | H01C | 7/02 |
| OBL | 5-29111 | 02/051993 | Japan | H01C | 7/12 |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.) Exr. initial **Details of Document** Coombs, Printed Circuit Handbook, 1996, p. 24.1-24.17. OB Harper, Electronic Packaging and Interconnection Handbook (1991), p. 1.37-1.43, 8.3-8.5, 8.53-8.56, 9.1-9.16, 9.41-9.49. Standler, Protection of Electronic Circuits from Overvoltages, 1989, p. 133. U.S. patent application Ser. No. 07/893626 (Chandler et al.), filed Jun. 5, 1992. "Protection of Batteries with PolySwitch.RTM. Devices", Raychem Corporation, Jan., 1987. Search Report for International Application No. PCT/US93/06480, dated Oct. 7, 1993. Search Report for International Application No. PCT/US94/10137, dated Nov. 23, 1994. Search Report for International Application No. PCT/US95/05567, dated Jun. 26, 1995. Search Report for International Application No. PCT/US95/07420, dated Sep. 4, 1995. "PolySwitch PTC Devices, Standard Product List", Raychem Corporation, May 1992. "PolySwitch SMD Surface Mount devices PTC overcurrent protection" trade brochure, Raychem Corporation, Nov. 1992. "PolySwitch SMD Installation Guidelines" trade brochure, Raychem Corporation, Nov. 1992.

| TU HONG | 10/16/06 |
|----------------------|-----------------|
| Examiner's signature | Date considered |

^{*} EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.